GH Phipps Construction Companies
5995 Greenwood Plaza Blvd.
Suite 100
Greenwood Village, CO 80111-4710
303-571-5377
303-629-7467 (fax)

TRANSMITTAL

No. 12J2003-0118

PROJECT: CHC-Radiology & Procedure Center Remodel

DATE: 01/23/2013

TO: ***HKS Inc
1900 Wazee St Ste 209
Denver CO 80202

RE: 230593-Testing and Balancing

ATTN: Carrie Hinshaw

Ph/Fax:

JOB: 12J2003

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings	☑ Approval	☐ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☐ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	**SENT VIA:**	☐ Returned
☐ Specifications / Product Data	☐ Attached	☐ Returned for Corrections
☑ Other: Test & Balance Report	☐ Separate Cover Via:	☑ Due Date: 02/06/2013

NOTES:

Item	*Package*	*Code*	*Rev.*	*Copies*	*Date*	*Description*	*Status*
Submittal	230593	230593.01	1	1	01/23/2013	Balance Report - Phase 1	Architect Review

CC: GH Phipps Construction Co., Rebecca Terrazas
GH Phipps Construction Co., James Rivera

Signed:

Max Anderson

NEBB Certification # 3235 ***JEDI Balancing, Inc.*** *Certification#BB009025C*
568 Briggs Street
P.O. Box 525
Erie, CO. 80516
Phone (720) 839-5333
Website: www.jedibalancing.com

Certified Test; Adjust; & Balance Report

Project	**Children's Hospital Radiology & Procedure Center**
Address	13123 E. 16th Ave. Aurora, CO 80045
Architect	HKS Inc.
Mechanical Engineer	Caveo Consulting Engineers
Contractor	GH Phipps
Balancing Supervisors	Don Pittser & Greg Barnes
Date	January 21, 2013
Job Number	2013-3798

Instrumentation:

Digital Manometer	Alnor Balometer EBT-721
Flowhood	Alnor Balometer EBT-721
Digital Pressure Gage	Alnor Hydronic Manometer HM-680
Tachometer	DT-36M
Digital Volt-Amp Meter	Fluke 335
Thermometer	Alnor Balometer EBT-721

Method of Balancing:

Supply, Return and Exhaust diffusers, grilles and registers were measured with an Alnor Balometer EBT-721.
Heating and Chilled water flow rates were measured with an Alnor Hydronic Manometer HM-680 connected to the installed flow meters.

Warranty Information:

This project was completed according to NEBB Procedural Standards.
The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB Procedural Standards for testing, adjusting, and balancing environmental systems. Any variances from design quantities, which exceed NEBB tolerances, are noted in the Test-Adjust-Balance Report Project Summary. If a Test-Adjust-Balance Report Project Summary is not issued directly following this cover page, all measurements met the design requirements as specified by the design mechanical engineer.

This project has a one-year guarantee on all Testing, Adjusting & Balancing from the date listed on this cover page.

Don Pittser
CEO
NEBB Supervisor

568 Briggs Street
P.O. Box 525
Erie, CO. 80516
NEBB Certification # 323
Phone (720) 839-5333 *Certification#BB009025C*
Web www.jedibalancing.com

TESTING, ADJUSTING AND BALANCING BUREAU
THE PROFESSIONAL'S CHOICE℠

ABBREVIATION INDEX

AHU: Air Handling Unit
RTU: Roof Top Unit
MAU: Make Up Air Unit
FCU: Fan Coil Unit
CRAC: Computer Room Air Conditioning Unit
VAV: Variable Air Volume
K Factor: Correction Factor
FPB: Fan Powered Box
AK: Area Correction
CUH: Cabinet Unit Heater
UH: Unit Heater
ERV: Energy Recovery Ventilator
ERU: Energy Recovery Unit
EF: Exhaust Fan
KEF: Kitchen Exhaust Fan
SF: Supply Fan
RF: Return Fan
TF: Transfer Fan
SEF: Smoke Exhaust Fan
SPF: Stairwell Pressurization Fan
SP: Static Pressure
TSP: Total Static Pressure
ESP: External Static Pressure
VP: Velocity Pressure
SA: Supply Air
RA: Return Air
OSA: Outside Air
OA: Outside Air
MA: Mixed Air
SD: Supply Diffuser
CD: Ceiling Diffuser
SWD: Sidewall Diffuser
ER: Exhaust Register
RG: Return Grille
CFM: Cubic Feet Per Minute
FPM: Feet Per Minute

Motor FLA: Full Load Amperage
S.F.: Service Factor
P.F.: Power Factor
Nom. Eff.: Nominal Efficiency
RPM: Revolutions per Minute
T1: Terminal 1
T2: Terminal 2
T3: Terminal 3
OD: Outside Diameter

TDH: Total Dynamic Head
PSI: Pounds per Square Inch
BV: Balance Valve
CS: Circuit Setter
Valve D.P.: Discharge Pressure
Valve S.P.: Suction Pressure
Diff.: Differential
Design D.P.: Design Differential Pressure
Actual D.P.: Recorded Differential Pressure
Ind.Imp.Dia. Indicated Impeller Diameter
in. wc: Inches Water Column
HW: Heating Water
CHW: Cooling Water
CW: Condenser Water
HX: Heat Exchanger
DX: Direct Expansion
EAT: Entering Air Temperature
LAT: Leaving Air Temperature
EWT: Entering Water Temperature
LWT: Leaving Water Temperature

MVD: Manual Volume Damper
OBD: Opposed Blade Damper
NAC: No Access
NG: Not Given
NIC: Not in Contract
E: Existing

JEDI BALANCING

NEBB #3235 TABB #BB009025C

Air Handling Unit

PROJECT: TCH RADIOLOGY AND PROCEDURE CENTER PHASE I
LOCATION: AURORA, CO

DATE: 1/21/2013
CONTACT: Trevor Quain
AUTHOR: Greg Barnes

SYSTEM/UNIT: AC-4-01
AREA:

Tested By: Greg Barnes
Test Date: January 20, 2013

Unit Data

Unit Manufacturer	DATA AIRE
Unit Model Number	DAPG-0532-P
Unit Serial Number	2012-3186-B
Total CFM Design	2000 CFM

Test Data

Total CFM Actual	2005
Return Air CFM Actual	2005
AC-4-01 / Supply Fan	
Fan RPM Actual	1102
Motor Volts 1	208
Motor Volts 2	209
Motor Volts 3	210
Motor Amps 1	2.4
Motor Amps 2	2.5
Motor Amps 3	2.6

Motor Data

AC-4-01 / Supply Fan	
Motor Manufacturer	LESSON
Motor HP	1-1\2
Motor RPM	1750
Motor Frame	145T
Motor Rated Volts	200-230/460
Motor Phase	3
Motor FL Amps	5.2-5.4\2.7
Motor Service Factor	1.15

Sheave Data

AC-4-01 / Supply Fan	
Motor Sheave Model	1VP50
Motor Sheave Bore	7\8 in.
Fan Sheave Model	1AK69
Fan Sheave Bore	3/4 in.
Number of Belts	1
Belt Size	A40

Test Pressures

Filter SP In	ATMOSPHERE in. wc
Filter SP Out	NO ACCESS in. wc
Cool. Coil SP In	NO ACCESS in. wc
Cool. Coil SP Out	0.51 in. wc
Fan SP In	0.51 in. wc
Fan SP Out	0.05 in. wc

AC-4-01 Supply Outlet Summary

System / Unit	Outlet Type	Type of Readin	Face Area	AK Factor	Design Readin	Prelim Reading	% Prelim	Final Reading	% Final Deviati
Outlet-01					400	620	155	395	99
Outlet-02					400	575	144	405	101
Outlet-03					400	555	139	410	103
Outlet-04					400	600	150	405	101
Outlet-05					400	525	131	390	98
Totals :	-	-	-	-	**2,000**	**2,875**	**144 %**	**2,005**	**100 %**

*** Notes**

AC-4-01	20-Jan-13	Greg Barnes	SHEAVE CHANGED FROM 1VP56 BELT A42

JEDI BALANCING

NEBB #3235 TABB #BB009025C

Air Handling Unit

PROJECT: TCH RADIOLOGY AND PROCEDURE CENTER PHASE I
LOCATION: AURORA, CO

DATE: 1/21/2013
CONTACT: Trevor Quain
AUTHOR: Greg Barnes

SYSTEM/UNIT: AC-4-02
AREA:

Tested By: Greg Barnes
Test Date: January 20, 2013

Unit Data

Unit Manufacturer	DATA AIRE
Unit Model Number	DAPG-0532-P
Unit Serial Number	2012-3185-B
Total CFM Design	2000 CFM

Test Data

Total CFM Actual	2005
Return Air CFM Actual	2005
AC-4-02 / Supply Fan	
Fan RPM Actual	1045
Motor Volts 1	208
Motor Volts 2	209
Motor Volts 3	210
Motor Amps 1	2.5
Motor Amps 2	2.4
Motor Amps 3	2.6

Motor Data

AC-4-02 / Supply Fan

Motor Manufacturer	LESSON
Motor HP	1-1\2
Motor RPM	1750
Motor Frame	145T
Motor Rated Volts	200-230/460
Motor Phase	3
Motor FL Amps	5.2-5.4\2.7
Motor Service Factor	1.15

Sheave Data

AC-4-02 / Supply Fan

Motor Sheave Model	1VP56
Motor Sheave Bore	7\8 in.
Fan Sheave Model	1AK6.75 OD
Fan Sheave Bore	3/4 in.
Number of Belts	1
Belt Size	A42

Test Pressures

Filter SP In	ATMOSPHERE in. wc
Filter SP Out	NO ACCESS in. wc
Cool. Coil SP In	NO ACCESS in. wc
Cool. Coil SP Out	0.51 in. wc
Fan SP In	0.51 in. wc
Fan SP Out	0.05 in. wc

AC-4-02 Supply Outlet Summary

System / Unit	Outlet Type	Type of Readin	Face Area	AK Factor	Design Readin	Prelim Reading	% Prelim	Final Reading	% Final Deviati
Outlet-01					400	410	103	385	96
Outlet-02					400	615	154	400	100
Outlet-03					400	595	149	420	105
Outlet-04					400	545	136	405	101
Outlet-05					400	635	159	395	99
Totals :	-	-	-	-	**2,000**	**2,800**	**140 %**	**2,005**	**100 %**

*** Notes**

JEDI BALANCING

NEBB #3235 TABB #BB009025C

Air Handling Unit

PROJECT: TCH RADIOLOGY AND PROCEDURE CENTER PHASE I
LOCATION: AURORA, CO

DATE: 1/21/2013
CONTACT: Trevor Quain
AUTHOR: Greg Barnes

SYSTEM/UNIT: E-AHU-01
AREA:

Tested By: Greg Barnes
Test Date: January 20, 2013

*** Notes**

SYSTEM/UNIT: E-AHU-01 / FPB-122
AREA:

Tested By: Greg Barnes
Test Date: January 17, 2013

Unit Data	
VAV Address	169
Box Inlet Size	0.52
K Factor	2.15

Test Data	
Max Design CFM	800 CFM
Max Actual CFM	795 CFM
Min Design CFM	240 CFM
Min Actual CFM	245 CFM
Reheat Design CFM	800 CFM
Reheat Actual CFM	810 CFM

E-AHU-01 / FPB-122 Supply Outlet Summary

System / Unit	Outlet Type	Type of Readin	Face Area	AK Factor	Design Readin	Prelim Reading	% Prelim	Final Reading	% Final Deviati
Outlet-01	SD				200	210	105	195	98
Outlet-02	SD				200	190	95	200	100
Outlet-03	SD				200	165	83	195	98
Outlet-04	SD				200	190	95	205	103
Totals :	**-**	**-**	**-**	**-**	**800**	**755**	**94 %**	**795**	**99 %**

*** Notes**

Air Handling Unit

PROJECT: TCH RADIOLOGY AND PROCEDURE CENTER PHASE I
LOCATION: AURORA, CO

DATE: 1/21/2013
CONTACT: Trevor Quain
AUTHOR: Greg Barnes

SYSTEM/UNIT: E-AHU-01 / FPB-123
AREA:

Tested By: Greg Barnes
Test Date: January 17, 2013

Unit Data	
VAV Address	170
Box Inlet Size	0.52
K Factor	2.07

Test Data	
Max Design CFM	800 CFM
Max Actual CFM	810 CFM
Min Design CFM	240 CFM
Min Actual CFM	245 CFM
Reheat Design CFM	800 CFM
Reheat Actual CFM	820 CFM

E-AHU-01 / FPB-123 Supply Outlet Summary

System / Unit	Outlet Type	Type of Readin	Face Area	AK Factor	Design Readin	Prelim Reading	% Prelim	Final Reading	% Final Deviati
Outlet-01	SD				200	145	73	195	98
Outlet-02	SD				200	140	70	195	98
Outlet-03	SD				200	220	110	210	105
Outlet-04	SD				200	195	98	210	105
Totals :	-	-	-	-	**800**	**700**	**88 %**	**810**	**101 %**

*** Notes**

JEDI BALANCING

NEBB #3235 #BB009025C

Air Handling Unit

PROJECT: TCH RADIOLOGY AND PROCEDURE CENTER PHASE I
LOCATION: AURORA, CO

DATE: 1/21/2013
CONTACT: Trevor Quain
AUTHOR: Greg Barnes

SYSTEM/UNIT: E-AHU-01 / VAV-121
AREA:

Tested By: Greg Barnes
Test Date: January 17, 2013

Unit Data	
VAV Address	141
Box Inlet Size	0.52
K Factor	1.98

Test Data	
Max Design CFM	600 CFM
Max Actual CFM	592 CFM
Min Design CFM	180 CFM
Min Actual CFM	185 CFM

E-AHU-01 / VAV-121 Supply Outlet Summary

System / Unit	Outlet Type	Type of Readin	Face Area	AK Factor	Design Readin	Prelim Reading	% Prelim	Final Reading
Outlet-01	SD				250	210	84	240
Outlet-02	SD				50	60	120	52
Outlet-03	SD				150	165	110	145
Outlet-04	SD				150	165	110	155
Totals :	-	-	-	-	**600**	**600**	**100 %**	**592**

*** Notes**

CEILING DEVICE SCHEDULE

Mark	Manufacturer	Model #	Module Size	Neck Size	Max N.C.	Notes
EG-1	TITUS	23RL	18x10	18x10	<30	
ER-1	TITUS	PAR	12x12	6x6	<30	
RR-1	TITUS	PAR	24x24	6x6	<30	
RR-2	TITUS	PAR	24x24	8x8	<30	
RR-3	TITUS	PAR	24x24	10x10	<30	
RR-4	TITUS	PAR	24x24	12x12	<30	
SD-1	TITUS	TMS	24x24	6"Ø	<30	
SD-2	TITUS	TMS	24x24	8"Ø	<30	
SD-3	TITUS	TMS	24x24	10"Ø	<30	

AIR TERMINAL BOX SCHEDULE

Tag	Type	Cooling Air Quantity Max. CFM	Cooling Air Quantity Min. CFM	Heating Air CFM	Heating Coil E.A.T. (°F)	Heating Coil L.A.T. (°F)	Heating Coil BTUH	Heating Coil Flow (GPM)	Heating Coil Pipe Size	Heating Coil E.W.T. (°F)	Heating Coil L.W.T. (°F)	Heating Coil Inlet Size	Manufacturer	Model #	Notes	Controls
S1D	REHEAT	1500 CFM	350 CFM		55	100		4.1		180	150	12"	EXISTING			
S2D	REHEAT	1950 CFM	475 CFM		55	100		5.3		180	150	14"	EXISTING			
S3B	REHEAT	700 CFM	150 CFM		55	100		1.9		180	150	8"	EXISTING			
S3D	REHEAT	1950 CFM	475 CFM		55	100		5.3		180	150	14"	EXISTING			
S4D	REHEAT	1500 CFM	350 CFM		55	100		4.1		180	150	12"	EXISTING			
S6B	REHEAT	400 CFM	75 CFM		55	100		1.1		180	150	6"	EXISTING			
S7B	REHEAT	1500 CFM	350 CFM		55	100		4.1		180	150	12"	EXISTING			
S8B	REHEAT	400 CFM	75 CFM		55	100		1.1		180	150	8"	EXISTING			
S9B	REHEAT	1000 CFM	250 CFM		55	100		2.7		180	150	10"	EXISTING			
S10B	REHEAT	1500 CFM	350 CFM		55	100		4.1		180	150	12"	EXISTING			
S11B	REHEAT	1500 CFM	350 CFM		55	100		4.1		180	150	12"	EXISTING			
S16B	REHEAT	1430 CFM	400 CFM		55	100		4.1		180	150	12"	EXISTING			
S21B	REHEAT	700 CFM	150 CFM		55	100		1.9		180	150	8"	EXISTING			
S23B	REHEAT	1500 CFM	350 CFM		55	100		4.1		180	150	12"	EXISTING			
S32A	REHEAT	1950 CFM	475 CFM		55	100		5.3		180	150	14"	EXISTING			
S34C	REHEAT	700 CFM	150 CFM		55	100		1.9		180	150	8"	EXISTING			
S39A	REHEAT	1950 CFM	475 CFM		55	100		5.3		180	150	14"	EXISTING			
S40A	REHEAT	1950 CFM	475 CFM		55	100		5.3		180	150	12"	EXISTING			
VAV-1	REHEAT	570 CFM	100 CFM	100	55	100	4730	.3	3/4"	180	150	8"	TITUS	DESV-8		DDC
VAV-2	REHEAT	1060 CFM	530 CFM	530	55	100	25040	1.7	3/4"	180	150	10"	TITUS	DESV-10		DDC
VAV-3	REHEAT	95 CFM	50 CFM	50	55	100	2360	.2	3/4"	180	150	6"	TITUS	DESV-6		DDC
VAV-4	REHEAT	2575 CFM	1290 CFM	1290	55	100	60950	4.1	1"	180	150	10"	TITUS	DESV-10		DDC
VAV-6	REHEAT	300 CFM	300 CFM	300	55	100	14180	0.9	3/4"	180	150	6"	TITUS	DESV-6		DDC
VAV-7	REHEAT	800 CFM	400 CFM	400	55	100	18900	1.3	3/4"	180	150	10"	TITUS	DESV-10		DDC
VAV-8	CONSTANT VOLUME	280 CFM	280 CFM	280	55	100	13230	0.9	3/4"	180	150	6"	TITUS	DESV-6		DDC

FLUID COOLER UNIT

Tag	Service	Manufacturer	Model	Operating Weight (LBS)	Dimmensions L	Dimmensions W	Dimmensions H	Controls	Comments	Electric Voltage	Electric Phase	Electric Hz.	Condenser # of Condenser Fans	Condenser Fan HP (ea)	Condenser FLA (ea)	Pump # of Pumps	Pump HP (ea)	Pump FLA (ea)	Pump GPM	Pump Total Head (FT.)
FCU-1	RADING ROOM AC UNITS	DATA AIRE	DAFC-2834	970	120	49	40	INT + DDC	1-4	208	3	60 Hz	3	.75	4.6	2	2	6.0	35	90

NOTES:
1. SINGLE POINT ELECTRICAL CONNECTION WITH FACTORY DISCONNECT.
2. REDUNDANT PUMPS WITH AUTO CHANGEOVER.
3. FACTORY PROVIDED EXPANSION TANK.
4. SYSTEM TO BE FILLED WITH 40% P.G.

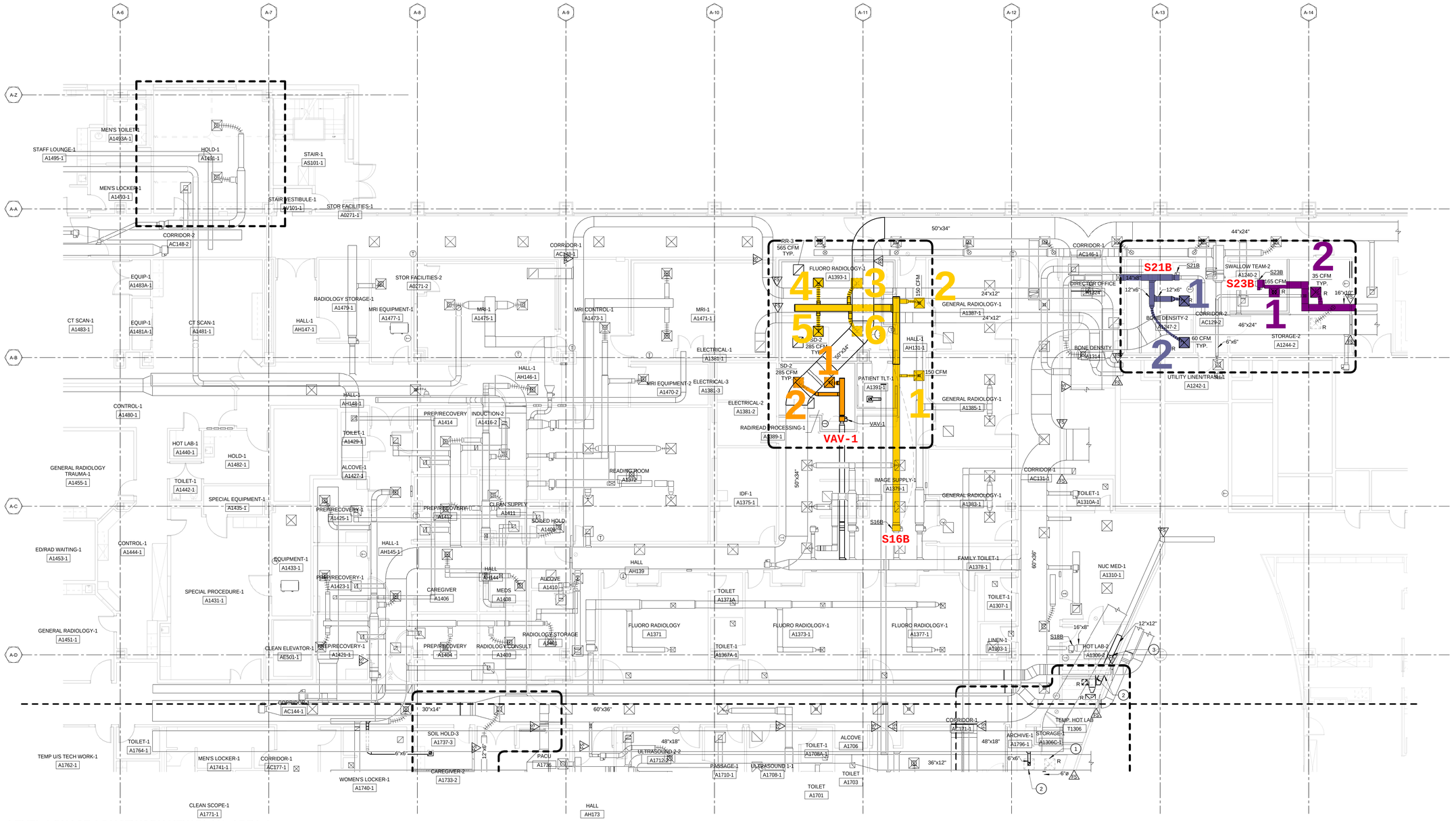
FAN SCHEDULE

Tag	Drawing Number	Area Served	Type	Manufacturer	Model	Operating Weight	Dimmensions L	Dimmensions W	Dimmensions H	Controls	Notes	Fan CFM	Fan Type	Fan Drive	Fan T.S.P. @ Alt. (In. W.C.)	Fan RPM Max	Motor HP	Motor V-P	Motor Type	Motor Starter	Motor E-Power	Sound Sound Inlet (LwA)	Sound Sound Outlet (LwA)
EF-201 A&B	10TH FLOOR	HOT LAB	INDUSTRIAL	COOK	70-MHA-SD	275	18	27	30	DDC	1,2,3,4	800 CFM	INDUSTRIAL UTILITY	BELT	4.0	2841	1.5	460-3	ODP	VFD	YES	88	78
EF-202	2MH1.1A	MRI-3&4	INLINE	COOK	195R8B	420	21	27	44	DDC		3600 CFM	UPBLAST	BELT	1.0	1379	1.5	460-3	ODP	VFD	YES	--	78

NOTES:
1. MOUNT ON EXISTING INERTIA BASES IN 10TH FLOOR MECHANICAL ROOM.
2. CONNECT TO DUCTWORK WITH FLEXIBLE CONNECTORS.
3. EXTENDED LUBE LINES.
4. BELT GAURD.
5. ADJUSTABLE SUPPORTS.

AIR CONDITIONING UNIT SCHEDULE

| Tag | Drawing # | Service | Type | Nom. Cap. (TONS) | Manufacturer | Model | Op. Wt. (LBS) | Dimmensions L (IN) | Dimmensions W (IN) | Dimmensions H (IN) | Mounting | Control Type | Notes | Electric V | Electric P | Electric Hz. | Electric Single Point AMP/MCA/MOP | Supply Fan CFM | Supply Fan Fan Type | Supply Fan Fan Class | Supply Fan E.S.P. @ Alt. (In. W.C.) | Supply Fan Motor HP | DX Cooling Coil Total Cap. (M BH) | DX Cooling Coil Sens. Cap. (MBH) | DX Cooling Coil E.A.T. DB | DX Cooling Coil E.A.T. WB | DX Cooling Coil L.A.T DB | DX Cooling Coil L.A.T WB | Compressor Section Refr. Type | Compressor Section # Comp. | Compressor Section FLA (Ea) | Conenser Water Glygol Type | Conenser Water Glycol % | Conenser Water GPM | Conenser Water Glycol P.D. (FT. W.C. Max) | Chilled Water Coil Supply Conn. | Chilled Water Coil Return Conn. | Chilled Water Coil Drain Conn. | Chilled Water Coil Max. Face Velocity (FPM) | Chilled Water Coil Total Cap. (MBH) | Chilled Water Coil Sens. Cap. (BTU H) | Chilled Water Coil E.A.T. DB | Chilled Water Coil E.A.T. WB | Chilled Water Coil L.A.T. DB | Chilled Water Coil L.A.T. WB | Chilled Water Coil Chilled H20 GPM | Chilled Water Coil Chilled H20 E.W.T. | Chilled Water Coil Chilled H20 L.W.T | Chilled Water Coil Chilled H20 % of Glycol | Chilled Water Coil Chilled H20 Type of Glycol | Chilled Water Coil Supply Conn. | Chilled Water Coil Return Conn. | Chilled Water Coil H20 P.D. (In. W.C. Max) | Humidifier Capacity #-Steam/ Hr | Humidifier Water Type | Humidifier Inlet Size | Humidifier Drain Conn. Size | Final Filter Type | Final Filter Depth | Final Filter MERV Rating |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---



1 LEVEL 1 PHASE 1 DUCTWORK NEW PLAN- AREA A

1/8" = 1'-0"

GENERAL NOTES:

NEW FLAG NOTES:

1. RAISE DUCT TIGHT TO STRUCTURE.
2. EXTEND DUCTWORK TO RELOCATED DEVICES IN TEMPORARY HOT LAB.
3. ALL HOT LAB EXHAUST DUCTWORK IS TO BE WELDED STAINLESS STEEL RATED TO -6.0"WG.

PLOT DATE:
8/16/2012 2:29:09 PM
TEMPLATE VERSION: 2.0.0.20100909

HKS

ARCHITECT
HKS, INC.
1900 WAZEE STREET, SUITE 209
DENVER, COLORADO 80202

MECHANICAL / ELECTRICAL CONSULTANT
CAVEO CONSULTING ENGINEERS, INC.
6143 WILLOW DRIVE, SUITE 405
ENGLEWOOD, COLORADO 80111

TECHNOLOGY CONSULTANT
RIMROCK GROUP
1080 NEW ALLEGIANCE DRIVE, SUITE 400
COLORADO SPRINGS, COLORADO 80921

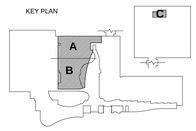
STRUCTURAL CONSULTANT
STRUCTURAL CONSULTANTS, INC.
3400 EAST BAYAUD AVENUE, SUITE 300
DENVER, COLORADO 80209

RADIOLOGY / PROCEDURE DEPARTMENT RENOVATION

Children's Hospital Colorado

OWNER
CHILDREN'S HOSPITAL COLORADO
ANSCHUTZ MEDICAL CAMPUS
13123 EAST 16TH AVENUE
AURORA, COLORADO 80045

KEY PLAN



REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
14977.004

DATE
17 AUGUST 2012

ISSUE
PERMIT SET

SHEET TITLE
PHASE 1 MECHANICAL DUCTWORK PLAN - LEVEL 1 AREA A

SHEET NO.
1MH1.1A

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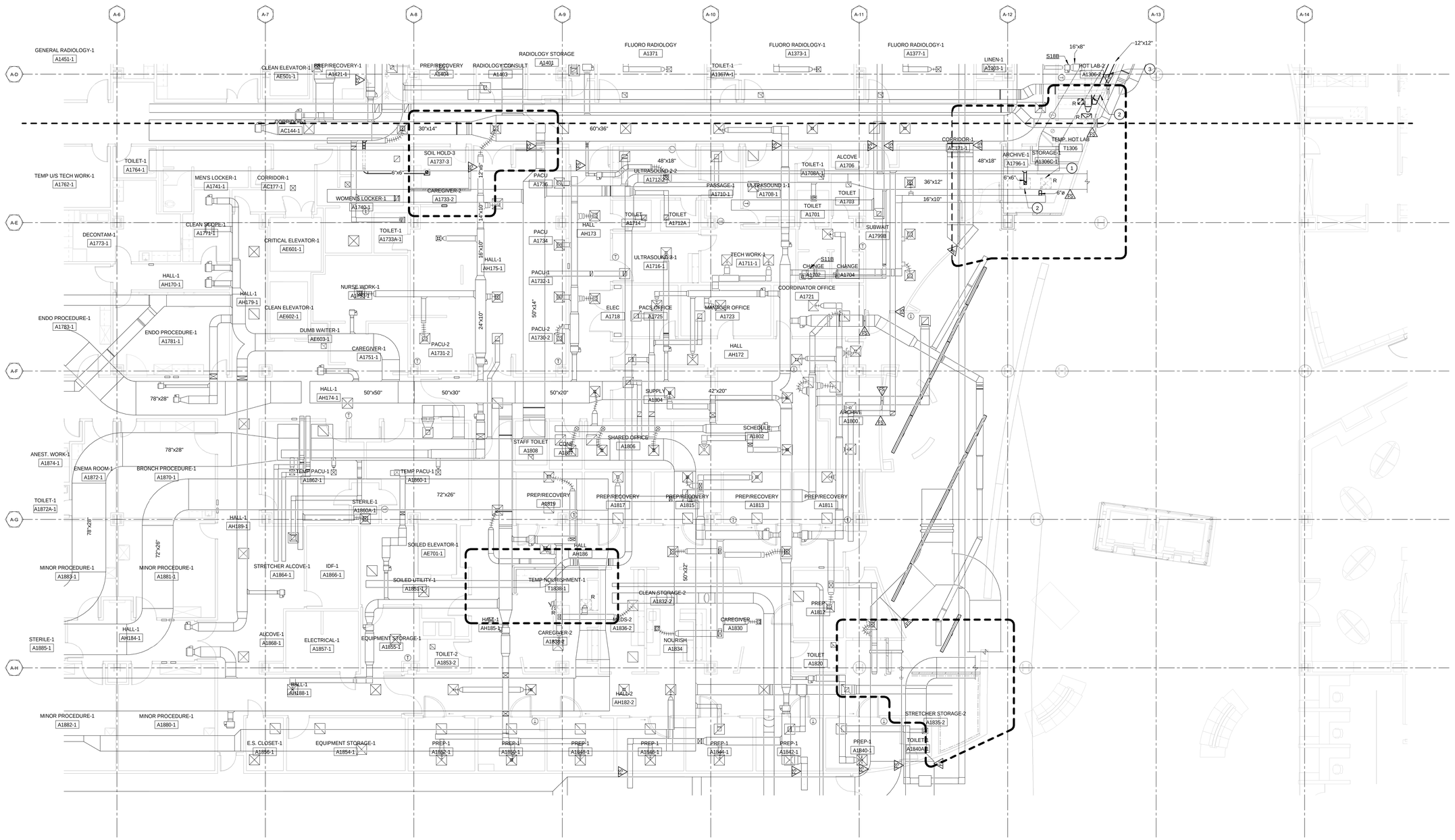

1 LEVEL 1 PHASE 1 DUCTWORK NEW PLAN- AREA B

1/8" = 1'-0"

GENERAL NOTES:

NEW FLAG NOTES: ◯

1. EXISTING SUPPLY DIFFUSER TO BE RELOCATED.
2. NEW RETURN DIFFUSER.

PLOT DATE: 8/16/2012 3:30:35 PM TEMPLATE VERSION: 2.0.0.20100909

HKS

ARCHITECT
HKS, INC.
1900 WAZEE STREET, SUITE 209
DENVER, COLORADO 80202

MECHANICAL / ELECTRICAL CONSULTANT
CAVEO CONSULTING ENGINEERS, INC.
6143 WILLOW DRIVE, SUITE 405
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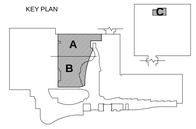
RADIOLOGY / PROCEDURE DEPARTMENT RENOVATION

Children's Hospital Colorado

OWNER
CHILDREN'S HOSPITAL COLORADO
ANSCHUTZ MEDICAL CAMPUS
13123 EAST 16TH AVENUE
AURORA, COLORADO 80045

KEY PLAN



REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
14977.004

DATE
17 AUGUST 2012

ISSUE
PERMIT SET

SHEET TITLE
PHASE 1 MECHANICAL DUCTWORK PLAN - LEVEL 1 AREA B

SHEET NO.
1MH1.1B

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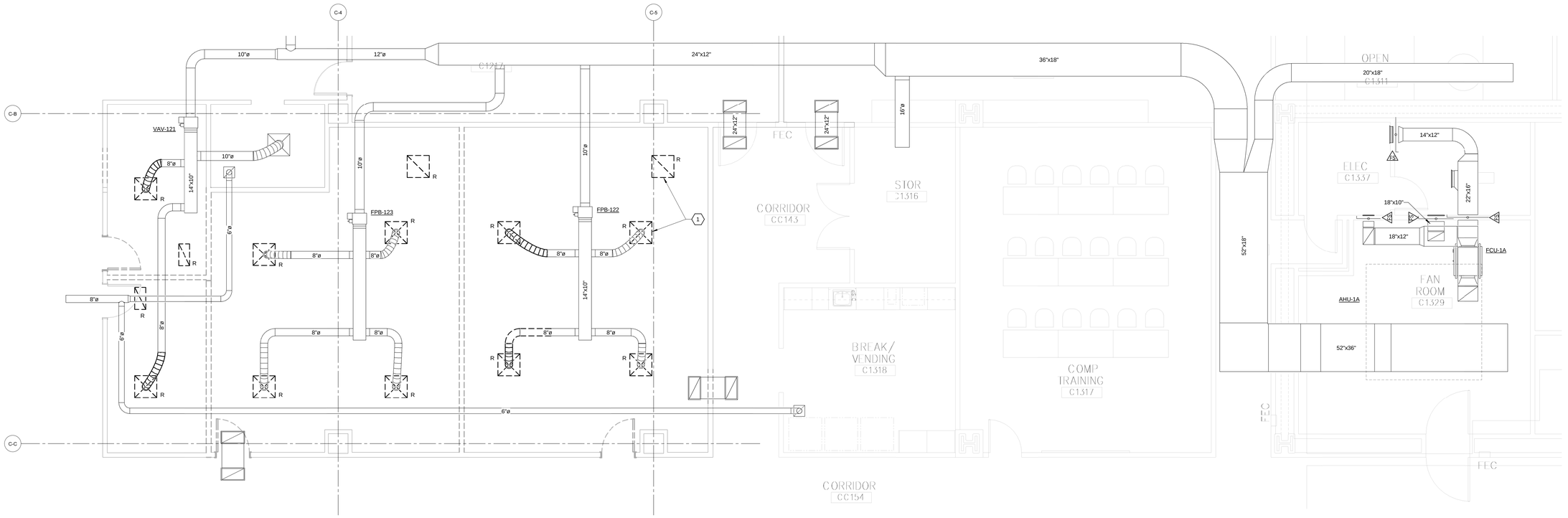
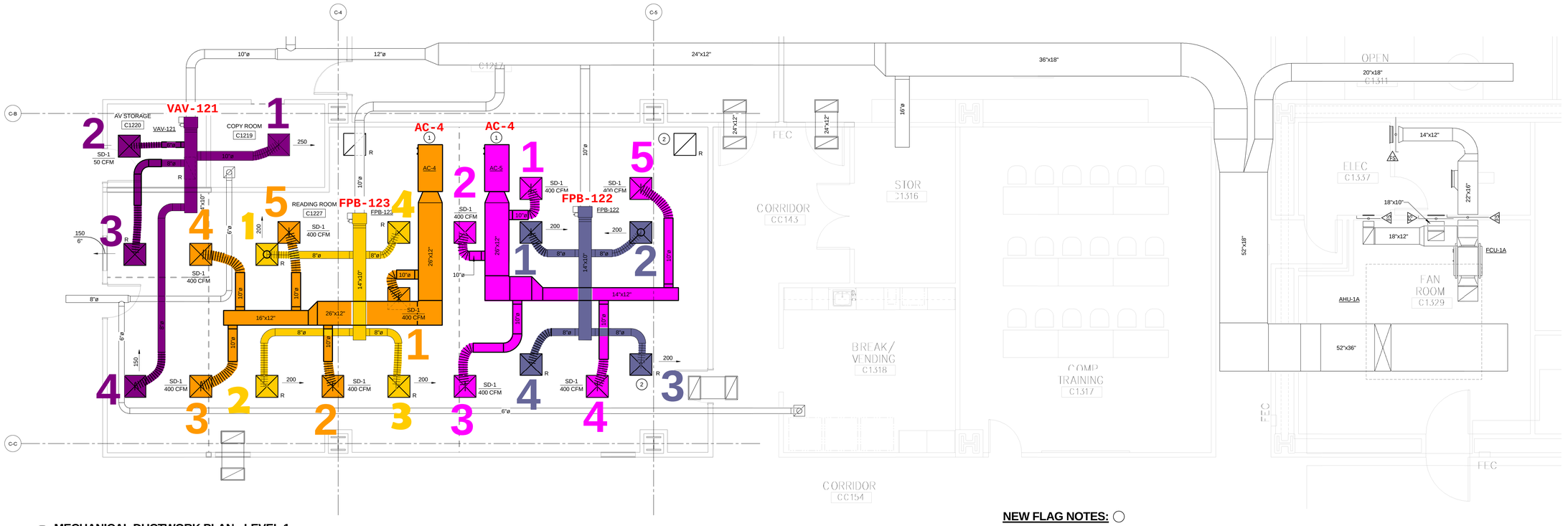


1 DEMOLITION MECHANICAL DUCTWORK PLAN - LEVEL 1

1/4" = 1'-0"

DEMO FLAG NOTES: ⬡

1. CEILING DEVICE TO BE RELOCATED, TYPICAL.



2 MECHANICAL DUCTWORK PLAN - LEVEL 1

1/4" = 1'-0"

NEW FLAG NOTES: ◯

1. WATER SOURCE AIR CONDITIONING UNITS. SUSPEND FROM STRUCTURE WITH 1" SPRING ISOLATORS. REFER TO SCHEDULE ON M601.
2. RELOCATED CEILING DEVICES, TYPICAL. ADJUST OR PROVIDE NEW FLEX DUCT AS NEEDED TO ACCOMMODATE NEW ARRANGEMENT.
3. SD-1, SUPPLY DIFFUSER, TYPICAL.

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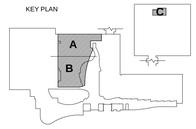

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HKS PROJECT NUMBER
14977.001

DATE
17 AUGUST 2012

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SHEET TITLE
PHASE 1 DEMO AND NEW MECH DUCTWORK PLAN - LEVEL 1 AREA C

SHEET NO.
1MH1.1C

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